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UNITED STATES PATENT AND TRADEMARK OFFICE

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10/771,947	02/04/2004	Hoc-Won Kim	678-1166	3784

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THE FARRELL LAW FIRM, P.C.
333 EARLE OVINGTON BOULEVARD
SUITE 701
UNIONDALE, NY 11553

EXAMINER
LAM, DUNG LE

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *3/5/07*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1 and 5* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1 and 5* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>04 February 2004</u> is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities:

Last paragraph of claim 1 reads, "wherein it is determined, by a skip determiner, whether a receiving operation for the retransmission data block is skipped, each of the MSs analyzes the header block of the received data to determine whether to receive the retransmission data block, and the (1) *transmission data* is made by allocating the (2) **retransmission data block** at a location (3) **where the retransmission data block** of the (4) *transmission data* block will be included".

Applicant's counsel stated on page 4 of the Remarks that "the word '*block*' should be *deleted* because the retransmission data block is not part of the transmission data block, but instead, is part of the transmission data." In another word, applicant counsel is suggesting that "retransmission data block is part of the transmission data"; however, this limitation is not in the current claim. Even with the deletion of the word "block" the claim language is still awkward and repetitive with the usage of components 2 and 3 above. Thus, the examiner suggests modifying the underlined limitation to clarify the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al** (US Pub. No. 2003/0005382) in view of **Choi** (US Pub. No.2003/0023915) further in view of **Tikalsky** (US Pub. No. 4,908,828).

1.   Regarding **claim 1**, **Chen** teaches a method for broadcasting data in a mobile communication system including a core network and a plurality of mobile stations (MSs) (102-104, Fig. 1 and wireless communication devices, WCD, para. 18), comprising the steps of: broadcasting, by the core network, transmission data over one shared downlink channel to the MSs within one base transceiver station (BTS) service area (para. 18 and 19);

and generating, by the MSs, receiving report data indicating whether the data has successfully been received (para. 20-22), and transmitting the receiving report data to the core network at uniquely assigned uplink channel positions (para. 23)

transmitting retransmission data blocks from the core network to the MSs following reception of the report data from the MSs (para. 30)

However, **Chen** does not explicitly teach that the core network splits the data of a main data block and that the data being retransmitted has a header. Nonetheless, it is known in the art that in noisy environment, large amount of data are split into smaller packets to send through the network. In an analogous art, **Choi** further teaches the splitting of the data into smaller blocks (para.18 and 19, Fig. 1) and that the non-received are retransmitted. **Choi** further teaches the main data block which is comprised of a header block, a retransmission data block and a transmission data block

which is also known in the art (para.18); each of the MSs analyzes the header block of the received data, to determine whether to receive the retransmission data block (examining the header information to determine what to do with the datablock, para. 18-20); Therefore, it would have been obvious for one of ordinary skill in the art to combine Chen's teaching of broadcasting method and Choi's teaching of breaking the data into smaller chunk as a known technique of packetizing in data transmission for the advantage of faster retransmission of information and reducing frame error rate. However, Chen and Choi's combination does not explicitly teach the sending retransmission missed packets at the location of retransmission data block and the step of determining by a skip determiner whether or not the retransmission data block should be received or skipped. In an analogous art, Tikalsky teaches that the receiving end use the header to check and accepts only the retransmitting packets that have previously not been received and the transmission data is made by allocating the retransmission data block at a location where the retransmission data block of the transmission data block will be included (Abstract, C1 Ln 47-62, C2 Ln 43- 64, C3 L34-55, C4 Ln 49-66, C5 L27-60). Therefore, it would have been obvious for one skill in the art at the time of the invention to combine Chen and Choi's teaching with **Tikalsky's** teaching of skipping the reception of a duplicated packet based on the analysis of the header in order avoid receiving duplicate packets unnecessarily and thereby minimize resource consumption.

2.   Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al** (US Pub. No. 2003/0005382) in view of **Choi** (US Pub. No. 2003/0023915) further in view of **Torsener** (US Publication No. 2005/0039101).

3.   Regarding **claim 5**, Chen teaches a method of claim 1. However, he fails to teach that the MSs waits for a transmission request from the core network in order to uplink the receiving report data indicating whether the transmission data has successfully been received. In analogous art, **Torsener** teaches that Node B may request the UE to report a status (para.80). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chen's teaching of broadcasting data to have **Torsener**'s teaching of requesting the UE to send a report status since this modification would prevent Node B from being overwhelmed/overloaded with numerous reports unnecessary under some circumstances.

Response to Arguments

Applicant's arguments filed 3/5/07 have been fully considered but they are not persuasive.

Applicant's counsel alleges that, "Chen teaches transmitting retransmission data blocks from the core network to the MSs following reception of the report data from the MSs. However, Chen does not transmit data including the header block, transmission and retransmission data blocks, as recited in Claim 1." The examiner disagrees. In the background of invention, Chen does allude to the concept of retransmitting the frame including the sequence number ([005]), which is known to be part of a header. One skill in the data transmission art would also agree that each data packet going through the network must have a header in order identify which sequence number or packet number is being sent and where is the packet's destination.

Applicant's counsel also alleges, "Choi does not specifically disclose that data including the header block, transmission and retransmission data blocks are transmitted after receiving the report data from the transmitter. Instead, Choi only retransmits error packets after receiving said request. In fact, since the MAC header is removed in Choi before the retransmission, it appears that it is not transmitted after receiving said report data. " The examiner disagrees. Choi teaches that to facilitate decoding in the preferred embodiment, a packet that is transmitted according to the present invention preferably includes indications of the <u>sequence number</u> or packet number, the (n, k) values ([0018]). It is noted that the payload/data length, the payload/data block

information in the MAC **header field** ([0018]). Furthermore, although, it is true that the

decoder removes the Mac header in order to store the correct packets to a buffer, the

encoder must encode the sequence/packet number in the header prior to retransmitting

the packets back to the receivers. Since packets may arrive out of order (beginning of

para. 20), the transmission data must include a header to encode the packet number

and destination for the receiver to distinguish which packet is being sent.

Applicant further argues that that, "Tikalsky does not specifically recite a

skip determiner that determines whether a receiving operation for the

retransmission data block is skipped. Although this determination may be

suggested in Tikalsky, the skip determiner, per se, is not disclosed in this

reference." The examiner disagrees. Since Tikalsky teaches the step of determining

whether to skip receiving a packet, Tikalsky reference inherently has a skip determiner

in order to perform the function of determining whether to skip receiving a packet.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).
A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the mailing date of this final action.

      Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

      If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

      Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER